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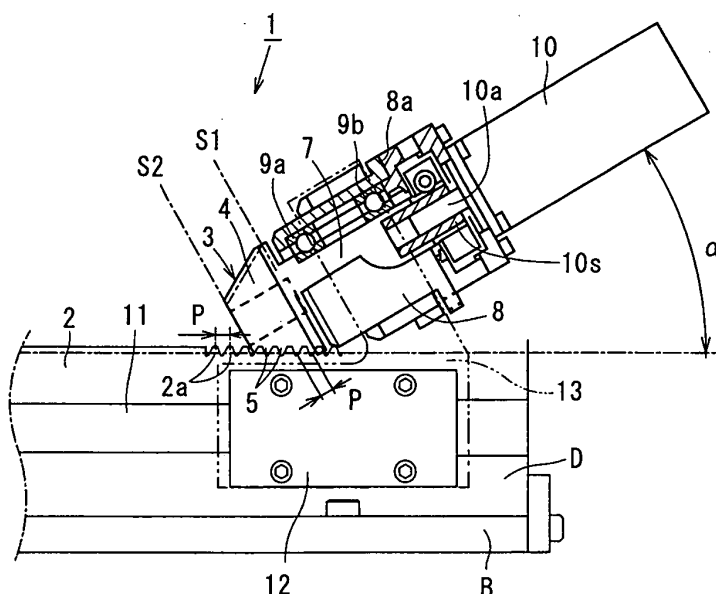
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(54) **A worm-rack type transmission device**

(57) In a worm-rack type transmission device (1), a curved side portion (6) is provided on rack teeth (2a) of a linear rack (2) in a manner to form a part of an ellipsoidal surface (E) and twisted by a changing rate (θ) of a torsional manner a toothed streak (5) of a worm wheel (3). The worm wheel (3) brings the toothed streak (5) into

engagement with the curved side portion (6) in a line-to-line contact, enabling to a self-locking property and strengthening a transmission power to insure a high transmission efficiency with a least friction loss so as effectuate a linear drive for an extended distance travel with a high precision.

Fig. 1





EUROPEAN SEARCH REPORT

Application Number
EP 09 25 0476

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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A	US 2 883 875 A (DAVIDSON DONALD E) 28 April 1959 (1959-04-28) * column 2, line 62 - column 3, line 3 * * column 3, lines 25-40 * * figures 2,5 *	1	
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The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 27 July 2011	Examiner Truchot, Alexandre
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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EP 09 25 0476

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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